

Citation

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Abstract

Native populations of the North American river otter (*Lontra canadensis*) in Indiana declined sharply through the early 1900s due to unregulated harvest and habitat loss and were believed extirpated from the state by 1942. To restore otters to portions of their historic range, 303 otters (184 male: 119 female) obtained from Louisiana were released at 12 sites in six watersheds (Muscatatuck, Patoka, southcentral Ohio, St. Joseph, Tippecanoe, upper Wabash) between 1995 and 1999. Fifty-nine (43 male:16 female) of these otters (19.5%) were known to have died through December 2005, most (81%) in traps set for other furbearers and from collisions with vehicles. Otter sign was found on 31 of 43 surveys (72%) at each of 11 release sites sampled 0-6 years ($\bar{x} = 2.5$) post-release. Overall detection rate was 20.6%. A total of 1328 post-release records, comprised of sightings (n = 884), accidental captures (n = 17), reports of otter sign (n = 170), and mortalities (n = 257) was compiled from 1995 through 2005. During this period, river otters were reported from 65 of 92 counties and 14 of 15 watersheds in Indiana. They are widely distributed in northeast, northcentral, and southern Indiana but are most common in 26 contiguous counties surrounding the 12 release sites. Otters are rare or were not reported from 57 counties in central Indiana. Reproduction was confirmed, either by recovery of untagged individuals and/or observations of family groups, each year after the initial release year and at 11 of 12 release sites. Size of family groups averaged 4.2 otters (range = 3-8). Ovulation rates based on presence of corpora lutea were 88% and 50% for adults and yearlings, respectively; mean litter size was 3.25 (SD = 1.12). Source of mortality for 206 (111 male: 95 female) untagged otters killed in Indiana was incidental trapping (n = 131), collisions with vehicles (n = 68), drowning (n = 5), and unknown factors (n = 2); distribution by age class was 54 juveniles (27.3%), 64 yearlings (32.3%), and 80 adults (40.4%). Recommendations for otter management in Indiana include defining occupied range, collecting age-specific reproductive parameters, and developing management strategies to protect, maintain, and regulate restored populations.